

Competence and morality dimensions of national and ethnic stereotypes: a study in six eastern-European countries

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Abstract

To investigate the role of competence and morality in stereotypes, a cross-national research was set up in six eastern-European countries. Study 1 measured the perceived desirability of stereotype attributes in ingroup versus outgroup members. Across countries, bipolar Competence and Morality components emerged. It was found that the perceived desirability of ingroup attributes was primarily competence-based, while desirability perceptions of outgroup attributes were mostly morality-based. In Study 2, participants in the six countries rated the occurrence of competence- and morality-related stereotype attributes among 10 national and ethnic target groups. Study 2 also assessed general evaluative attitudes and perceptions of power and conflict in inter-nation relations. Competence and morality dimensions fully explained the evaluative structure of national and ethnic stereotypes, generating a four-fold typology of sinful–loser, sinful–winner, virtuous–loser and virtuous–winner stereotypes. This typology was strongly related to perceptions of power and conflict between national groups. © 1997 John Wiley & Sons, Ltd.

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COMPETENCE AND MORAL DESIRABILITY OF STEREOTYPE ATTRIBUTES

The idea that stereotypes have strong evaluative meaning is one of the key points in stereotyping research. The present study attempts to explain evaluative judgments of stereotype attributes in terms of distinct competence and morality components. As a functional basis for the competence–morality distinction, a goal-based model of stereotyping is proposed, relating competence and morality as trait categories to the goal categories of means and ends. The goal-based model allows us to explain the evaluative structure of stereotypes in terms of goal structures in intergroup relations. Specifically, competence and morality are conceived as ingroup–outgroup anchored evaluative categories in group stereotypes, which are related to perceptions of power and conflict in intergroup relations.

Trait Dimensions

The evaluative structure of person and group perception appears to be multidimensional, and allows for selective or differentiated evaluative appraisals in interpersonal and intergroup relations (e.g. Bond & Hewstone, 1988; Mummendey & Schreiber, 1984). The focus of the present research is on the distinction between competence and morality as separate evaluative dimensions. The concept of morality and competence in social perception are used in the broad sense of perceived ‘beneficence’, as distinct from perceptions of efficiency (Giles & Ryan, 1982). This distinction has first been established in research on implicit personality theories, where the dimensions *social and intellectual desirability* mirror general morality and competence categories. Together they explain the cognitive organization of personality traits: social desirability opposes typical traits such as *honest, helpful, tolerant* and *dishonest, irresponsible, selfish*, desirability contains traits such as *persistent, intelligent, thoughtful*, as opposed to *foolish, unintelligent, clumsy* (Rosenberg & Sedlak, 1972). Associations with other dimensional structures have been extensively discussed elsewhere (Peeters, 1992a; White, 1980).

Though we know of no systematic replications of the competence–morality distinction in the area of group perception, some studies of ethnic and national stereotypes have included competence- and morality-related attributes. Brewer (1968) identified separate moral and competence factors for *trust* and *respect* in east-African interethnic relations. Funk, Horowitz, Lipshitz and Young (1976) explained the perceived structure of American ethnic groups in terms of near-orthogonal competence and moral properties such as *intelligent* and *aggressive*. In a recent study of national stereotypes in Western Europe, a factor *efficient* was primarily competence-related, as distinct from a morality-related factor *empathic* (Linssen & Hagendoorn, 1994). The present research envisages an extrapolation of the competence–morality distinction in person perception to the area of group stereotypes.

Goal Categories

Recent research on goal-based representations suggests a functional basis for morality and competence dimensions in terms of distinct goal categories. Personality psychologists have long argued that goals are central to person perception (Mischel, 1973; Pervin, 1983). Accordingly, studies on trait inference demonstrate the key role of goal categories in the cognitive organization of personality traits (Claeys, Timmers, & Phalet, 1993; Hoffman, Mischel, & Mazze, 1981; Read, Jones, & Miller, 1990; Trzebinski, 1985; Trzebinski, McGlynn, Gray, & Tubbs, 1985).

Two goal categories are generally discerned: categories of the actor's goals, and categories of conditions and means to realize the goals (Trebinski, 1985). Whereas the first category identifies the actor's intended goals, the second category defines the probability of goal attainment. Likewise, Read and Miller (1989) distinguish goal orientations, indicating a person's intended goals, from resources and plans, indicating the capacity for goal attainment. The dual goal model in social cognition parallels Leontiev's (1978) earlier distinction between intention and attainment as hierarchical levels of activity.

The two goal categories have been related to inferences about morality and competence in person perception. While intended goals are crucial to determine the actor's morality, goal attainment is crucial to decide on his competence. Attribution studies in moral and achievement situations support intent-based judgments of moral responsibility, as opposed to outcome-based judgments of ability or competence (Reeder & Spores, 1983; Salili, Maehr, & Gilmore, 1976; Schultz & Wright, 1985). In a study by Wojciszke (1994), evaluatively ambiguous scenarios of sinful success (e.g. unpunished cheating) or virtuous failure (e.g. inefficient helping) generated alternative morality- and competence-based interpretations that contributed independently to evaluative impressions. We conclude that perceptions of competence and morality are functionally related to inferences about intended goals and goal attainment.

It is the aim of this study to extend the goal-based interpretation of competence and morality in person perception to the area of group stereotypes. If stereotypes are organized around goal categories, stereotypic attributes should function as indicators of group goals. Thus, moral attributes would identify intended group goals, and competence-related attributes would define the group's capacity of goal attainment.

Ingroup-Outgroup Perspectives

Because the goal-relevance of behaviour differs between actors and observers, goal categories are perspective-dependent. It is found that actors prefer competence-based interpretations of their own behaviour, whereas observers interpret the behaviour of others in moral rather than competence terms (Wojciszke, 1994, 1997). Actors are engaged in the pursuit of their current goals, so they are preoccupied by the efficient performance of goal-directed action (Wojciszke, 1994). Because competence is important to improve the efficiency of goal attainment, competence-related features of behaviour are most salient and relevant to the actor. Conversely, observers are involved as actual or potential targets in interactions with others, and therefore, they

are motivated to understand and predict the others' intended goals (Wojciszke, 1994). Because (positive) moral behaviour is usually beneficial to other people, and immoral behaviour is harmful to others, morality-related features of behaviour are most relevant to the observer.

In so far as actor–observer differences in social inferences generalize to ingroup–outgroup relations (Stephan, 1985), this implies selective concerns with effective ingroup performance and intended outgroup goals in the context of intergroup relations. Concretely, we expect that the perceived desirability of ingroup traits is primarily competence-based, so that ingroup competence is more desirable than ingroup morality, and ingroup incompetence is more undesirable than ingroup immorality. Conversely, desirability of outgroup traits would be primarily morality-based, so that outgroup morality is more desirable than outgroup competence, and immorality in outgroups is more undesirable than outgroup incompetence.

COMPETENCE AND MORAL STRUCTURE OF NATIONAL STEREOTYPES

Social-Value Orientations

Within a social-motivational paradigm of interpersonal and intergroup relations, competence and morality components have been related to distinct social-value orientations. Social values are defined as self–other anchored evaluative categories in person and group perception. A first dimension *self-concern* opposes positive and negative orientations towards the self, while a second dimension *other-concern* opposes positive and negative orientations towards others (McClintock & Van Avermaet, 1982).

In line with a goal-based interpretation of the competence–morality distinction, competence- and morality-related trait inferences were successfully related to value choices in decomposed games. It was found that a person's perceived competence or *might* is a function of positive or negative self-concern (based on choices in decomposed games), while perceptions of *morality* are a function of the person's positive or negative other-concern (Liebrand, Jansen, Rijken, & Suhre, 1986; Van Lange & Kuhlman, 1994).

In a similar vein, Peeters (1983) explained trait-value associations by the *self-* versus *other-profitable* character of competence- and morality-based traits. While self-profitability refers to the positive or negative adaptive value of a trait for the self, other-profitability refers to the positive or negative adaptive value of a trait for others. It was found that competence-related attributes, such as efficiency, are directly self-profitable (whatever a person intends to do, it is better for him to do it efficiently), but ambiguous for others (an efficient friend is better than a less efficient one, but an efficient enemy might be worse than a less efficient one). In contrast, moral attributes, such as honesty, are directly other-profitable, while ambiguous for the person himself (honesty can be good when it is reciprocated, but not when it is exploited) (De Boeck & Claeys, 1988; Peeters, 1983, 1992a,b).

In summary, high or low competence is related to positive or negative outcomes for self, based on the self-concern or the self-profitable value of competence-related

attributes, while high or low moral standards are related to positive or negative outcomes for others, on the basis of the other-concern or the other-profitable value of moral attributes.

If the social-motivational framework is generalized to intergroup relations, social-value orientations correspond to ingroup–outgroup anchored evaluative categories. Thus, social value orientations in intergroup relations refer to positive or negative expected outcomes for the ingroup and for outgroups (McClintock, 1988). In terms of competence and morality, it is assumed that perceived morality in group stereotypes distinguishes between positive or negative social-value orientations towards outgroups, while stereotype competence adds a distinction between positive or negative orientations towards the ingroup.

A Four-Fold Typology

With regard to stereotype profiles, competence and morality dimensions generate a typology of positive, ambiguous and negative stereotypes, while corresponding social values spell out expected patterns of ingroup and outgroup outcomes associated with the stereotypes. The combination of competence and morality dimensions discriminates between four stereotype profiles (Wojciszke, 1994; see Figure 1). Whereas a wholly negative *sinful–loser* stereotype defines the target group as both immoral and incompetent, a wholly positive *virtuous–winner* stereotype pictures the target as both highly moral and competent. The evaluatively ambiguous *sinful–winner* or *virtuous–loser* stereotypes characterize the target as either immoral but competent, or moral but incompetent.

Accordingly, social values discriminate between profiles of expected ingroup and outgroup outcomes, going from aggression, over competition and cooperation, to altruism (McClintock & Van Avermaet, 1982). Our four-fold typology differs from the full social-values model only in that it does not include neutral outcomes. Although the terms *aggression* and *altruism* are originally associated with neutral ingroup outcomes in the full model, they will be used here to indicate expectations of negative ingroup outcomes as well (corresponding to *sado-masochism* and *martyrdom* respectively in the terminology of Maki, Thorngate, & McClintock, 1979).

Two parallel strands of research have associated competence and morality with different social-value orientations (i.e. self- versus other-concern) and different adaptive values (i.e. self- versus other-profitability) (Van Lange & Kuhlman, 1994; Peeters, 1983). The trait-value association allows us to spell out corresponding trait profiles and social values, so as to derive a joint typology of group stereotypes and intergroup relations. This hypothetical typology is graphically represented in Figure 1. First, wholly negative *sinful–loser* stereotypes would be associated with negative outcome expectations for outgroups, as well as for the ingroup, in aggressive intergroup relations. Second, wholly positive *virtuous–winner* stereotypes would go together with mutually positive outcome expectations in cooperative relations. Third, ambiguous *sinful–winner* stereotypes would correspond to expectations of relative ingroup gains at the cost of outgroups in competitive relations. Finally, ambiguous *virtuous–loser* stereotypes would refer to positive outcome expectations for outgroups, together with negative expectations for the ingroup, in altruistic relations.

SUMMARY OF THE HYPOTHESES

In summary, it has been argued that competence and morality constitute separate evaluative categories in person perception, and that the competence–morality distinction can be extended to group stereotypes. *Hypothesis 1* replicates this two-dimensional framework: it is expected that the perceived desirability of stereotype attributes is structured on the basis of distinct competence and morality dimensions. As a functional basis for the competence–morality distinction, a goal-based model is proposed. While competence is important for successful goal attainment and therefore most relevant to the actor, morality indicates beneficial or harmful intended goals and is therefore more relevant to the observer. The goal-based interpretation implies differential ingroup–outgroup evaluative biases in terms of competence and morality. *Hypothesis 2* holds that the relative desirability of ingroup attributes is mostly competence-based, whereas the relative desirability of outgroup attributes is mostly morality-based.

Virtuous-Loser Stereotype	Virtuous-Winner Stereotype
Moral and Incompetent	Moral and Competent
Altruistic Social Values	Cooperative Social Values
Perceived Conflict Low	Perceived Conflict Low
Perceived Power Low	Perceived Power High
Sinful-Loser Stereotype	Sinful-Winner Stereotype
Immoral and Incompetent	Immoral and Competent
Aggressive Social Values	Competitive Social Values
Perceived Conflict High	Perceived Conflict High
Perceived Power Low	Perceived Power High

Figure 1. Hypothetical four-fold typology of group stereotypes and intergroup relations as a function of competence and morality dimensions

Extending the goal-based interpretation of the competence-morality distinction, stereotype competence and morality are associated with ingroup- versus outgroup-concerned social-value orientations. The social-motivational approach allows a differentiation of evaluative group hierarchies in terms of competence and morality components. *Hypothesis 3* proposes a four-fold typology of group stereotypes on the basis of stereotype competence and morality. The typology discriminates between negative sinful-loser stereotypes, evaluatively ambiguous sinful-winner and virtuous-loser stereotypes, and positive virtuous-winner stereotypes. Moreover, the evaluative structure of stereotypes is functionally related to positive or negative outcome expectations for the ingroup and for outgroups. *Hypothesis 4* maps the four-fold typology of sinful-winner, sinful-loser, virtuous-loser, and virtuous-winner stereotypes respectively onto aggressive, competitive, cooperative and altruistic patterns of expected outcomes in intergroup relations.

OVERVIEW OF THE STUDIES

To put these hypotheses to a test, two studies were simultaneously carried out, so that participants in Study 1 were a subsample of those in the more extensive Study 2. Study 1 induced (national)ingroup-outgroup perspectives on the desirability of stereotype attributes. It is the aim of Study 1 to validate the dual structure of perceived desirability in stereotypes and to show its implications for ingroup-outgroup evaluative bias. Hypothesis 1 on competence and morality dimensions was tested by way of simultaneous component analysis (SCA) on desirability ratings in the six countries. It was predicted that competence and morality would constitute distinct bipolar components in the cross-national structure of desirability perceptions.

To test hypothesis 2 on ingroup-outgroup perspective dependence, desirability ratings were subjected to repeated-measurements multivariate analyses of variance (MANOVA), with group perspective, trait valence and trait dimension as within-subjects factors. It was predicted that the effect of trait valence would be qualified by a second-order interaction with trait dimension and group perspective, so that for ingroup traits, competence would be more desirable than morality, and incompetence less desirable than immortality, and for outgroup traits, it would be the other way round: morality would be more desirable than competence, and immortality less desirable than incompetence.

Study 2 was set up to relate competence and morality dimensions to the perceived structure of national and ethnic stereotypes. The study assessed auto-stereotypes of the own national group, hetero-stereotypes of other national and ethnic groups, and general evaluations of own and other national groups. To test hypothesis 3 on evaluative categories in national and ethnic stereotypes, stereotype competence and morality, and general evaluative attitudes, were linearly regressed over the stereotype configuration based on multi-dimensional scaling (ALSCAL). It was predicted that competence and morality would constitute a dual evaluative hierarchy, so that negative, ambiguous and positive stereotypes would fall into a four-fold typology of sinful losers, sinful winners, virtuous losers, and virtuous winners.

Participants in Study 2 also rated perceived economic or political power and perceived economic or territorial conflict in relation to other national groups. High or low perceived power were thought to reflect more or less positive expectations with regard to ingroup outcomes, because powerful groups are better equipped to attain ingroup goals than less powerful groups. Similarly, high or low perceived conflict was thought to indicate more or less negative expectations with regard to outgroup outcomes, since hostile groups are more likely to cause harm to other groups than less hostile groups. To test hypothesis 4 on social values in intergroup relations, the configuration of national stereotypes (ALSCAL) was entered in multiple regressions with perceptions of power and conflict as dependent variables. It was predicted that competence and morality dimensions would relate to perceptions of power and conflict in inter-nation relations, so that sinful–loser stereotypes correspond to aggression (low power, high conflict), stereotypes of sinful–winners to competition (high power, high conflict), virtuous–winner stereotypes to cooperation (high power, low conflict), and stereotypes of virtuous–losers to altruism (low power, low conflict).

STUDY 1

Method

Participants

The study was part of a cross-national survey research on national and ethnic stereotypes. In total, 888 youngsters between 15 and 18 years old (40 per cent boys and 60 per cent girls) completed the rating task. Respondents were drawn from secondary schools in the capitals of six eastern European countries: Russia ($n = 97$), Byelorussia ($n = 133$), Bulgaria ($n = 158$), Hungary ($n = 161$), Poland ($n = 175$), and the Czech Republic ($n = 164$). All respondents belonged to the national majority in their country.

Procedure and Measurement

The study consisted of a series of desirability ratings with stereotype attributes as stimuli. Rating scales had been translated into the national languages and back-translated to English, following the Brislin procedure (Brislin, 1986). Participants received a booklet in their respective languages with the rating scales and filled it out in the classroom. Desirability was rated on a 9-point scale going from 1 (*completely undesirable*) over 5 (*neutral*) up to 9 (*completely desirable*). The measure of perceived desirability consisted of 12 stereotype attributes. The attribute list was a selection of traits which were clearly evaluative in meaning on the basis of a previous study on national stereotypes (Linssen & Hagendoorn, 1994). The list was composed of seven positive traits (i.e. *honest*, *efficient*, *self-confident*, *competitive*, *intelligent*, *tolerant* and *modest*) and five negative traits (i.e. *aggressive*, *selfish*, *slow*, *rude* and *clumsy*). Half of the traits were assumed to refer to the moral realm (i.e. *honest*, *aggressive*, *selfish*, *tolerant*, *rude* and *modest*) and half to the realm of competence (i.e. *efficient*, *self-confident*, *competitive*, *intelligent*, *slow* and *clumsy*).

Finally, alternative ingroup and outgroup perspectives were induced as within-subject conditions. The same trait list was rated first for ingroup members and subsequently for outgroup members. In the ingroup condition, participants were instructed to think of members of their own national group. For instance, the instruction in Bulgaria was: *How desirable or undesirable would it be for Bulgarians if all Bulgarians had the attributes listed below?* In the outgroup condition, participants were asked to think of members of a specific national outgroup. For instance, some Bulgarians were asked: *How desirable or undesirable would it be for Bulgarians if all Russians had the attributes listed below?* In each country, four relevant national outgroups (i.e. *Germans*, *Russians*, and other eastern-European nations such as *Byelorussians*, *Czechs*, *Poles* or *Hungarians*) were specified and randomly assigned to four subgroups of participants. By specifying national outgroups, the design avoids reference to an overly abstract and evaluatively ambiguous generalized outgroup, and it provides a stability test of desirability ratings across varying outgroups¹.

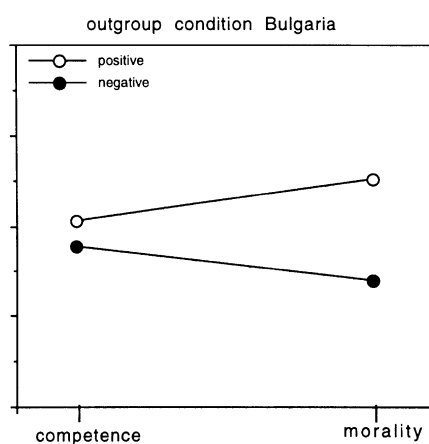
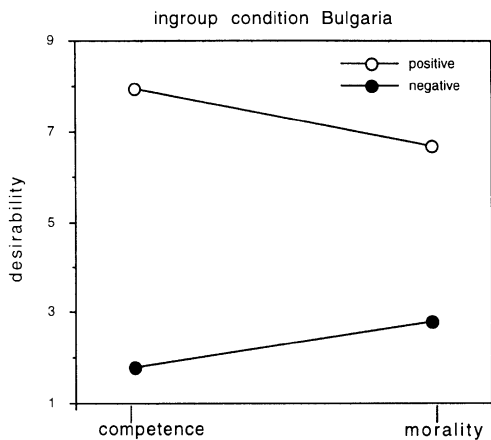
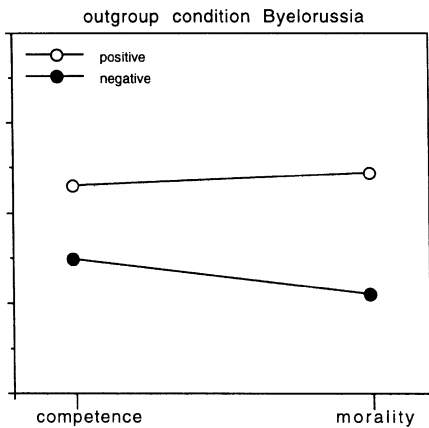
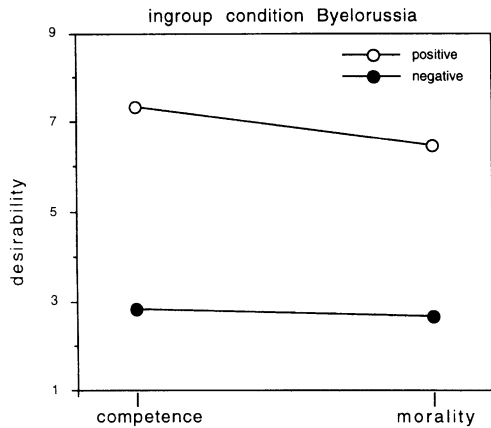
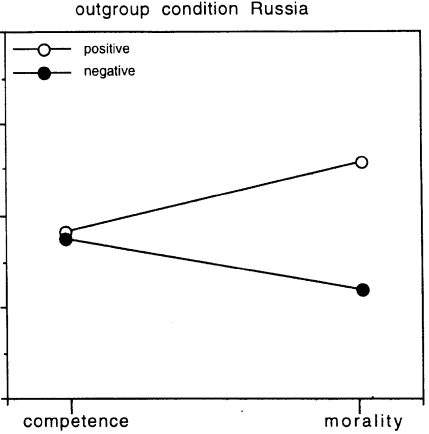
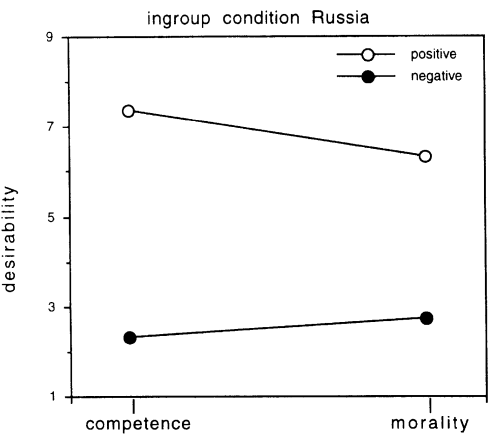
Results and Discussion

Desirability of Stereotype Attributes

To establish the cross-national structure of desirability perceptions, desirability ratings in ingroup and outgroup conditions were used as input for simultaneous component analysis (SCA) (Kiers, 1990). Given the same number of components in all comparison groups, a major advantage of SCA over (pooled-within-groups) principal component analysis in cross-national research, is that SCA maximizes explained variances in each group (Millsap & Meredith, 1989). In accordance with hypothesis 1, the cross-national solutions in both ingroup and outgroup conditions revealed a two-dimensional structure: a first bipolar morality component opposes *honest*, *tolerant* and *modest* on the positive side to *aggressive*, *selfish* and *rude* on the negative side, and a second bipolar competence component consists of *efficient*, *competitive*, *self-confident* and *intelligent* as positive traits, together with *slow* and *clumsy* as negative traits. On average, cross-national morality and competence dimensions explained 43.32 per cent and 51.69 per cent of the variance in respective ingroup and outgroup conditions. Country-by-country coefficients of internal consistency further document cross-national equivalence for both morality ($0.50 < \alpha < 0.82$ in ingroup, and $0.72 < \alpha < 0.83$ in outgroup condition) and competence ($0.56 < \alpha < 0.74$ in ingroup, and $0.64 < \alpha < 0.84$ in outgroup condition). Moreover, country-by-country interfactor correlations and loading patterns attest to the discriminant validity of competence and morality as distinct evaluative components². In accordance with hypothesis 1, competence and morality dimensions constitute a dual evaluative structure of

¹Across countries and attributes, only 19 out of 432 differences between outgroup means were significant ($p < 0.05$), and all differences were small with $d < 1.5$ scale points on a 9-point scale.

²Country-by-country interfactor correlations after oblique rotation were moderate to low ($0.15 < |r| < 0.45$ in ingroup, and $0.01 < |r| < 0.37$ in outgroup condition). Country-by-country loadings were substantial to high ($0.39 < |\lambda| < 0.82$ across conditions) and consistently higher than the corresponding cross-loadings.



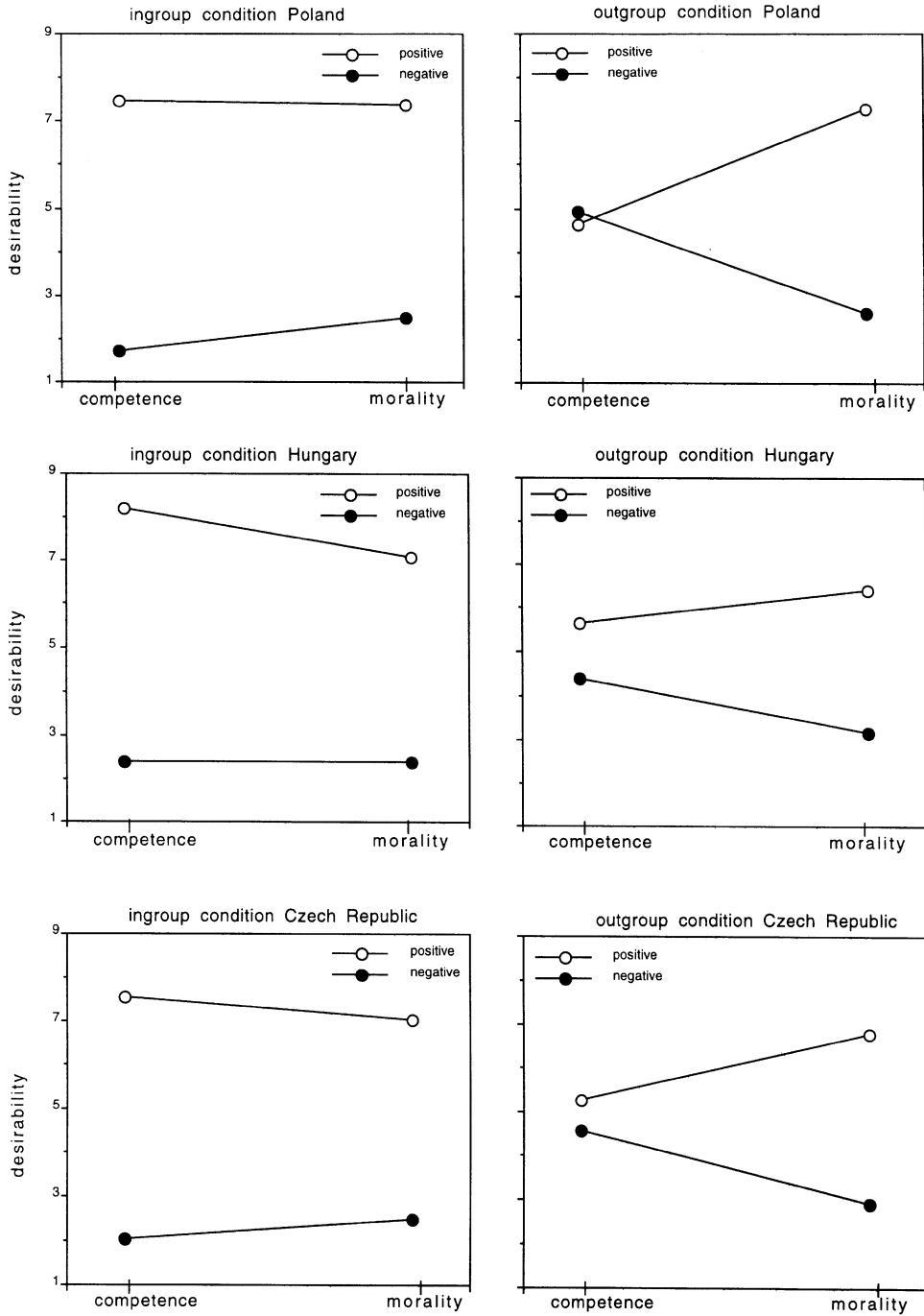


Figure 2. Mean perceived desirability as a function of ingroup-outgroup condition, trait dimension and trait valence for Russians ($n = 97$), Byelorussian ($n = 133$), Bulgarians ($n = 158$), Poles ($n = 175$), Hungarians ($n = 161$), and Czechs ($n = 164$)

desirability perceptions in stereotypes. The competence–morality holds for ingroup and outgroup perspectives across the six countries.

Ingroup–Outgroup Perspectives

To investigate ingroup–outgroup evaluative bias, desirability ratings in the six countries were subjected to a $2 \times 2 \times 2$ repeated-measurements MANOVA design with condition (ingroup, outgroup), trait valence (positive, negative), and trait dimension (morality, competence) as within-subject factors. Figure 2 shows mean perceived desirability ratings in ingroup and outgroup conditions as a function of trait valence and moral or competence categories in the six countries. Due to the power of significance tests in large samples, all effects included in the complete design emerged as highly significant ($p < 0.0001$). Description and discussion are therefore limited to major findings, covering only those effects for which a similar composite pattern of simple effects could be replicated in at least four (out of six) countries (Jaccard, Turrissi, & Wan, 1991).

Across countries, the analyses revealed a strong but trivial main effect of valence ($p < 0.0001$), with positive traits being perceived as more desirable than negative traits. Valence effects held within both ingroup and outgroup conditions in the six countries, except for outgroup competence in Russia and in Poland (see Figure 2). However, the valence main effect was further qualified by a significant ($p < 0.0001$) condition-by-valence interaction across countries (Russia, $F(3,94) = 77.77$; Byelorussia, $F(3,130) = 91.03$; Bulgaria, $F(3,155) = 181.69$; Poland, $F(3,172) = 276$; Hungary, $F(3,158) = 338.23$; and the Czech Republic, $F(3,161) = 204.5$). Across countries, condition-by-valence interactions were obtained for competence as well as morality categories, except for morality in Poland (see Figure 2). Apparently, positive traits were seen as more desirable among ingroup than among outgroup members, while negative traits were perceived as more undesirable among ingroup than among outgroup members. In other words, evaluative judgments of traits attributed to ingroup members were more extreme than evaluations of the same traits among outgroup members. In view of hypothesis 2 on ingroup–outgroup evaluative bias, the second-order dimension-by-valence-by-condition interaction is of most interest. This interaction effect was significant ($p < 0.0001$) in the six countries (Russia, $F(3,94) = 83.42$; Byelorussia, $F(3,130) = 100.48$; Bulgaria, $F(3,155) = 167.3$; Poland, $F(3,172) = 271.02$; Hungary, $F(3,158) = 344.86$; and the Czech Republic, $F(3,161) = 222.23$). Across countries, the expected pattern emerged, as can be seen from Figure 2. For positive traits among ingroup members, competence was perceived as somewhat more desirable than morality, and likewise, for negative traits among ingroup members, incompetence was seen as somewhat less desirable than immorality, except for Byelorussians and Hungarians, for whom ingroup incompetence was not more undesirable than immorality. Conversely, for positive traits among outgroup members, morality was clearly more desirable than competence, and likewise, for negative traits among outgroup members, immorality was clearly less desirable than incompetence. The overall pattern of results confirms hypothesis 2 on ingroup–outgroup perspectives: while competence-based desirability is most important with regard to ingroup attributes, morality-based desirability is more important for outgroup attributes.

STUDY 2

Method

Participants

Study 2 was conducted in the framework of the same cross-national research on national stereotypes (see Study 1). The complete sample of 1143 secondary-school pupils between 15 to 18 years of age (40 per cent boys and 60 per cent girls) participated in this study (i.e. 178 Russians, 176 Byelorussians, 206 Bulgarians, 183 Hungarians, 202 Poles and 198 Czechs).

Procedure and Measurements

The study consisted of a series of rating tasks. Respondents filled out booklets with the rating tasks in the classroom.

First, participants in the six countries assessed 10 national and ethnic stereotypes on the 12 stereotype attributes (see Study 1). Target groups were nine national groups, including their own national group, of which six were eastern-European nations (*Russians, Bulgarians, Hungarians, Polish, Byelorussians and Czechs*) and three were western-European nations (*English, Germans and Italians*), as well as one ethnic group with a history of ethnic antagonism in the six respondent countries (*Jews* in Russia, *Turks* in Bulgaria, *Gypsies* in Hungary, the *German minority* in Poland, the *Russian minority* in Byelorussia and the *Slovak minority* in the Czech Republic). The order of presentation of stereotype attributes and target groups was varied between four versions of the rating task in each country. National and ethnic stereotypes were based on the perceived occurrence of stereotype attributes among target-group members. A continuous rating scale was used, ranging from 0 per cent (e.g. *no Bulgarian has the trait*) to 100 per cent (e.g. *all Bulgarians have the trait*). To obtain average scores for the 60 national and ethnic stereotypes (i.e. 10 target groups by 6 respondent countries) on the 12 attributes, occurrence ratings were aggregated over individual respondents within the six countries.

Next, respondents in the six countries indicated general evaluative attitudes towards own and other national groups on a bipolar 9-point scale, ranging from 1 (*completely unfavourable*) over 5 (*neutral*) to 9 (*completely favourable*). In addition, they assessed inter-nation relations according to four criteria. The first two criteria measured perceptions of territorial and economic conflict between own and other national groups. Respondents indicated their agreement with statements such as *Bulgaria has economic conflicts with my country* and *Bulgaria has territorial conflicts with my country* on a 9-point scale from 1 (*completely disagree*) to 9 (*completely agree*). The third and fourth criterion measured perceived economic and political power of own and other national groups on a 9-point rating scale from 1 (*negligible*) to 9 (*extreme*). To obtain average scores for the 54 nation-by-nation pairs (six of which regard national self-perceptions), ratings of perceived conflict and power were aggregated over respondents within the six countries, and so were general evaluative attitudes.

Competence and Morality Scores

Composite scores for stereotype competence and morality were computed as weighted sums of the 12 stereotype attributes. The attribute values in the six countries were perceived occurrences of these attributes in 10 national and ethnic target groups in Study 2. On the basis of their loadings on cross-national Competence and Morality components in common SCA-solutions for attribute desirability (see Study 1), attributes were assigned positive ($w=1$), negative ($w=-1$), neutral ($w=0$) weights.³ To obtain average scores for the 60 national and ethnic stereotypes, individual competence and morality scores of national and ethnic stereotypes were aggregated over respondents within the six countries.

Results and Discussion*Evaluative Structure of Stereotypes*

Nonmetric multidimensional scaling (ALSCAL) was used to establish the perceived structure of national and ethnic stereotypes (Young & Lewyckyj, 1979). The 60 stereotypes were entered as stimuli. Euclidian profile distances between the 60 stereotypes were computed over the 12 attributes. A two-dimensional structure was obtained ($RSQ=0.97$; $Stress=0.18$) (see Figure 3). The two-dimensional solution showed a substantial and sufficient improvement of fit over the one-dimensional solution ($RSQ=0.82$; $Stress=0.26$)⁴. Hypothesis 3 was concerned with the presence of morality and competence as distinct components in the evaluative structure of national and ethnic stereotypes. The hypothesis was verified by way of linear multiple regressions (Kruskal & Wish, 1978; Rosenberg & Sedlack, 1972). Aggregated competence and morality scores and general evaluations of the 60 stereotypes were used as dependent variables, and the coordinates of the stereotype configuration were entered as independent variables (*DIM1* and *DIM2*). Standardized regression weights identified the first dimension as the Competence component in national and ethnic stereotypes ($\beta=0.96$ for *DIM1*, $p<0.0001$; $\beta=-0.05$ for *DIM2*, $p>0.10$; $R^2=0.96$), while the second dimension was interpreted as the Morality component ($\beta=0.13$ for *DIM1*, $p<0.001$; $\beta=0.98$ for *DIM2*, $p<0.0001$; $R^2=0.99$) (see Table 1). The combination of high regression weights for the corresponding dimension ($\beta>0.90$; see Kruskal & Wish, 1978) and low regression weights for the other dimension supports the validity of competence and morality as distinct components in the perceived structure of stereotypes.

³In composite morality scores, the traits honest, tolerant and modest received positive weights, aggressive, selfish and rude negative weights, and the remaining traits zero weights. In composite competence scores, the traits efficient, competitive, self-confident and intelligent were weighted positively, slow and clumsy negatively, and the remaining traits were set to zero. The use of a trichotomized weight matrix did not substantially reduce explained variances of competence and morality components across countries (42.16 per cent and 50.46 per cent in ingroup and outgroup conditions) (Kiers, 1990).

⁴To establish cross-national equivalence for stereotype assessments in the six countries, profile distances between stereotype attributes have been subjected to cross-national INDSCAL analyses (Hui & Triandis, 1985). An INDSCAL-solution in two dimensions with good overall and country-by-country fit supported the validity of stereotype assessments in the six countries (mean $RSQ=0.94$; mean $Stress=0.11$).

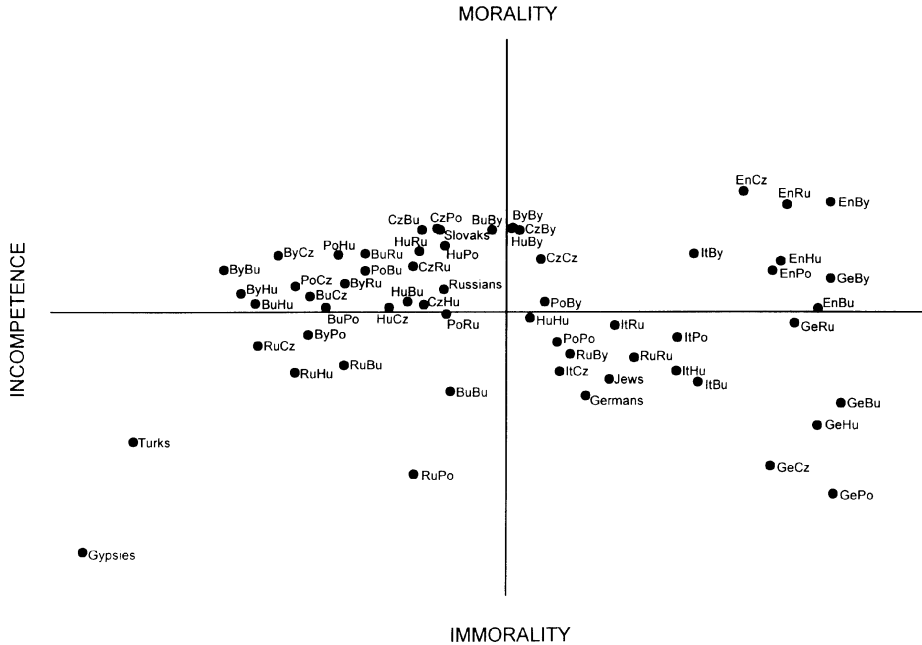


Figure 3. Two-dimensional configuration of 60 national and ethnic stereotypes as related to stereotype incompetence versus competence (dimension 1) and morality versus immorality (dimension 2). Stimulus labels indicate pairs of stereotyped groups (Ru, Russians; By, Byelorussians; Bu, Bulgarians; Hu, Hungarians; Po, Poles; Cz, Czechs; Ge, Germans; It, Italians; En, English; and Jews, Russians, Turks, Gypsies, Germans, and Slovaks, ethnic minorities) by respondent groups (Ru, Russians; By, Byelorussians; Bu, Bulgarians; Hu, Hungarians; Po, Poles; Cz, Czechs). E.g. EnHuv, English as stereotyped by Hungarians.

Table 1. Regression of stereotype competence, stereotype morality, and general evaluative attitudes over the stimulus dimensions of 60 ethnic and national stereotypes

	Standardized regression weights for dimensions		
	Mutiple correlation	Dimension 1	Dimension 2
Competence	0.96**	0.96**	-0.05
Morality	0.99**	0.13**	0.98**
Evaluation	0.77**	0.65**	0.40**

** $p < 0.0001$.

While the two-dimensional framework was sufficient to interpret the configuration of stereotypes, the location in this configuration of a third general evaluative dimension further clarified its evaluative meaning (see Table 1). The overall configuration of stereotypes appeared strongly evaluative ($R^2 = 0.77$). Both dimensions had clear evaluative connotations, but neither could be identified as purely evaluative ($\beta = 0.65$ for *DIM1*, $p < 0.0001$; $\beta = 0.40$ for *DIM2*, $p < 0.0001$). It

follows that competence and morality components in stereotypes have mixed evaluative-descriptive meanings. Together they constitute a dual evaluative hierarchy of national and ethnic stereotypes. These findings are in line with hypothesis 3 on stereotype competence and morality as ingroup-outgroup anchored evaluative categories.

A configurational interpretation of the perceived structure of national and ethnic stereotypes is based on their coordinate profiles on competence and morality dimensions (see Figure 3). First, a wholly negative stereotype of *sinful-loser* was located in the lower left quadrant, and it applied to Gypsy and Turkish minorities, Byelorussians as seen by Poles, the Russians as seen by the central-European countries, and the Bulgarian autostereotype. Second, the evaluative ambiguous stereotype of *sinful-winner* made up the lower right quadrant and consisted of German and Jewish minorities, the Germans and the Italians (except for Byelorussians), as well as the Polish, Russian and Hungarian autostereotypes. Third, a wholly positive stereotype of *virtuous-winner* was located in the upper right quadrant and contained the English, Italians as seen by Byelorussians, and the Czech and Byelorussian autostereotypes. Finally, an evaluatively ambiguous *virtuous-loser* stereotype emerged in the upper left quadrant. It included the remaining reciprocal stereotypes between eastern-European countries, together with the Slovak and Russian minorities. The overall configuration reflects the four-fold evaluative typology of national and ethnic stereotypes in hypothesis 3.

National Stereotypes and Inter-Nation Relations

Finally, hypothesis 4 specified expected associations between the evaluative structure of national stereotypes and aggressive, competitive, cooperative, or altruistic social values in inter-nation relations. Hypothetical associations were based on perceived power and conflict as indicators of ingroup-outgroup concerned expectations. Hence, the two-dimensional configuration of national stereotypes was related to perceived power and conflict as external properties (Carroll, 1972; Funk *et al.*, 1976). To this end, aggregated ratings of perceived conflict and power were regressed over the coordinates of the 54 nation-by-nation pairs (i.e. 9 stereotyped countries by 6 respondent countries). As predicted, perceived economic and political power in inter-

Table 2. Regression of perceived political and economic power, and territorial and economic conflict over the stimulus dimensions of 54 national stereotypes

	Standardized regression weights for dimensions		
	Mutiple correlation	Dimension 1	Dimension 2
Political power	0.92**	0.90**	-0.23*
Economic power	0.95**	0.93**	-0.18*
Territorial conflict	0.52*	-0.06	-0.51*
Economic conflict	0.54*	-0.18	-0.51*

* $p < 0.001$; ** $p < 0.0001$.

nation relations were very closely associated with stereotype competence ($\beta = 0.93$ and 0.90 for *DIM1*, $p < 0.0001$). In addition, significant but rather weak negative relations were found between perceived power and morality ($\beta = -0.18$ and -0.23 for *DIM2*, $p < 0.001$) (see Table 2). As expected, perceived territorial and economic conflicts between nations were negatively associated with stereotype morality ($\beta =$ twice -0.51 for *DIM2*, $p < 0.0001$). No significant associations were found between perceived conflict and competence (see Table 2). In sum, the evaluative structure of national stereotypes was strongly associated with perceptions of power ($R^2 = 0.95$ and 0.92) and to a lesser extent also with perceived conflict ($R^2 = 0.52$ and 0.54) in inter-nation relations (see Table 2).

When perceptions of power and conflict are related to the configurational interpretation of national stereotypes, associations between the evaluative structure of national stereotypes and the goal structure of inter-nation relations can be further specified (see Figure 3). With regard to the most *sinful-loser* stereotype, a profile of high conflict with low power tends to interfere with both ingroup and outgroup gains. Hence, the *sinful-loser* stereotype is associated with negative outcome expectations in aggressive inter-nation relations (e.g. Byelorussians as seen by Poles). For the evaluatively ambiguous *sinful-winner* stereotype, high conflict goes together with high power. This pattern corresponds to ingroup gains at the cost of outgroups in competitive inter-nation relations (e.g. Germans as seen by Poles). The most positive *virtuous-winner* stereotype combines high power with low conflict, and stands for joint ingroup and outgroup gains in cooperative relations (e.g. English as seen by Czechs). Finally, an ambiguous *virtuous-loser* stereotype combines low conflict with low power. This pattern allows for outgroup gains in the absence of ingroup gains, and characterizes so-called altruistic relations (e.g. Poles as seen by Czechs).

In line with hypothesis 4, the evaluative structure of national stereotypes is functionally related to perceptions of inter-nation relations. Specifically, patterns of perceived power and conflict between national groups confirms hypothetical associations between the four-fold typology of national stereotypes and patterns of outcome expectations in intergroup relations.

GENERAL DISCUSSION

Despite their different focus and method, the present studies yield convergent results that shed an interesting light on the role of competence and morality categories in group perception and intergroup relations.

Competence and Morality in Group Perception

The findings in Study 1 confirm hypothesis 1 that competence and morality constitute distinct evaluative categories in group perception. The competence-morality distinction allows a conceptual refinement of the evaluative dimension in group perception. The dual evaluative structure was replicated for ingroup and

outgroup perspectives. Moreover, structural equivalence was established across languages and cultures in six eastern-European countries. Competence and moral components in Study 1 extend the competence–morality distinction in person perception to the area of group stereotypes.

Study 1 also sustains the primacy of competence-based desirability in the evaluative appraisal of ingroup attributes, as opposed to primarily morality-based desirability in evaluations of outgroup attributes. The results are in line with hypothesis 2, which generalizes actor–observer differences found in person perception to intergroup relations. To explain ingroup–outgroup biases in perceptions of competence and morality, a goal-based model was introduced. The goal-based model relates morality- and competence-related traits to the distinct goal categories of intention and attainment. Alternative moral inferences for outgroup traits and competence-based inferences for ingroup traits were expected and found on the basis of selective concerns with intended outgroup goals and effective ingroup performance respectively.

Evaluative Structure of National and Ethnic Stereotypes

Multiple-group systems have typically been analysed as a one-dimensional cumulation of evaluative distances between groups (Hagendoorn, 1995). In line with hypothesis 3, distinct competence and morality dimensions better explained perceived distances between group stereotypes than a purely evaluative one-dimensional ordering. The two-dimensional evaluative structure in Study 2 generates a four-fold typology of national and ethnic stereotypes: from wholly negative sinful losers, over evaluatively ambiguous sinful winners and virtuous losers, to wholly positive virtuous winners.

The dual hierarchy of group stereotypes offers a refinement of the general evaluative dimension in group hierarchies, so that groups can be selectively elevated or degraded on competence or morality dimensions. For example, on the basis of evaluative distances between ethnic minorities and national majorities, all minority groups are subject to derogation by the majority (see Figure 3). But derogation can be more or less selective, so that minority stereotypes discriminate between sinful losers (Gypsy and Turkish minorities), sinful winners (Jewish and German minorities) and virtuous losers (Russian and Slovak minorities). Likewise, evaluative distances between auto- and heterostereotypes (except for Bulgaria) show a general tendency towards ingroup favouritism (see Figure 3). But indiscriminate favouritism in virtuous–winner stereotypes of Byelorussians and Czechs, is supplemented by more selective forms of favouritism in sinful–winner stereotypes of Russians, Hungarians and Poles.

Social Values in Inter-Nation Relations

To account for the duality of evaluative group hierarchies in terms of competence and morality, a social-motivational framework was used (McClintock, 1988). In line

with a goal-based interpretation of the competence–morality distinction, competence and moral traits have been assigned distinct social-value orientations (self- versus concern) or adaptive values (self- versus other-profitability) in interpersonal relations (Peeters, 1983; Van Lange & Kuhlman, 1994). Extending social-motivational findings to the area of group stereotypes, stereotype competence and morality are conceived as ingroup–outgroup anchored evaluative categories. The idea of ingroup-versus outgroup-concerned evaluation has important theoretical implications, because it relates the evaluative structure of group stereotypes to goal structures in intergroup relations. Empirically, perceptions of competence and (im)morality in national stereotypes were associated with perceived balance of power and conflict of interest between national groups. In line with hypothesis 4, perceptions of power and conflict accompanying sinful–loser, sinful–winner, virtuous–loser, and virtuous–winner stereotypes, were in accordance with typical outcome expectations for ingroup and outgroups in aggressive, competitive, altruistic, and cooperative intergroup relations.

One major constraint is that perceived presence or absence of power and conflict need not cover the full goal structure behind the stereotype configuration. For example, really other-concerned morality is more than avoidance of conflict. Likewise, really self-defeating incompetence goes well beyond weakness or lack of power. Moreover, perceived power and conflict seem to explain some stereotypes less well than others. Perceptions of power and conflict adequately explain the majority of more or less consensual stereotypes across countries, such as Russians as sinful losers, Germans and Italians as sinful winners, eastern-European neighbours as virtuous losers, and English as virtuous winners. But particular national or ethnic stereotypes, such as Byelorussians as seen by Poles, or Gypsy and Turkish minorities in Hungary and Bulgaria, may owe less to the presence of conflicting political or economic interests, than to a longstanding history of antagonism and ideological degradation. To go beyond *post-hoc* historical interpretations, perceptions of past antagonism or exploitation should be included as criteria in the assessment of international relations. In addition, cross-sectional and longitudinal stereotype research could be directed at the issue of stereotype change (or resistance to change) in response to ongoing societal transformations in Eastern Europe.

A final limitation concerns the social-motivational conceptualization of group stereotypes and intergroup relations, which remains open to different interpretations. In particular, the precise goal-based meaning of stereotype (in)competence needs further clarification. When a distinction is made between different goal categories, *expected* ingroup–outgroup outcome patterns associated with social values, need not always coincide with *preferred* ingroup or outgroup outcomes. Whereas morality-related evaluation is mostly intent-based and thus more likely to reflect real values or preferences, evaluations of competence are usually outcome-based and tend to focus on abilities or expectations of goal attainment (Read & Miller, 1989; Trzebinski, 1985). For example, stereotype incompetence seems to imply negative expectations with regard to ingroup outcomes. But negative expected outcomes are not necessarily blamed on negative intended goals in the stereotyped group. Rather, negative expectations may be attributed to adverse conditions or limited resources which impede the attainment of positive group goals. The social-motivational model might therefore gain in precision by taking into account different goal categories in person and group perception.

REFERENCES

- Bond, M. H., & Hewstone, M. (1988). SIT and the perception of intergroup relations in Hong Kong. *International Journal of Intercultural Relations*, **12**, 153–170.
- Brewer, M. B. (1968). Determinants of social distance among East-African tribal groups. *Journal of Personality and Social Psychology*, **10**, 279–289.
- Brislin, R. W. (1986). The wording and translation of research instruments. In W. J. Lonner & J. W. Berry (Eds), *Field methods in cross-cultural research* (pp. 137–164). Beverly Hills: Sage.
- Carroll, J. D. (1972). Individual differences and multidimensional scaling. In R. N. Shepard, A. K. Romney, & S. B. Nerlove (Eds), *Multidimensional scaling: Theory and applications in the behavioral sciences* (Vol. 1). New York: Seminar Press.
- Claeys, W., Timmers, L., & Phalet, K. (1983). Stable individual differences in situation-behaviour, construct-behaviour, and goal-behaviour relations. *European Journal of Personality*, **7**, 139–158.
- De Boeck, P., & Claeys, W. (1988). What do people tell us about their personality when they are freed from the personality inventory format. Paper presented at the 4th European Conference on Personality, Stockholm.
- Funk, S. G., Horowitz, A. D., Lipshitz, R., & Young, F. W. (1976). The perceived structure of American ethnic groups: The use of multidimensional scaling in stereotype research. *Sociometry*, **39**, 116–130.
- Giles, H., & Ryan, E. B. (1982). Prolegomena for developing a social psychology of language attitudes. In E. B. Ryan & H. Giles (Eds), *Attitudes towards language variation*. London: Edward Arnold.
- Hagendoorn, L. (1995). Intergroup biases in multiple group systems: The perception of ethnic hierarchies. *European Review of Social Psychology*, **6**, 199–228.
- Hoffman, C., Mischel, W., & Mazze, K. (1981). The role of purpose in the organisation of information about behavior: Trait-based versus goal-based categories in person cognition. *Journal of Personality and Social Psychology*, **49**, 211–225.
- Hui, C. H., & Triandis, H. C. (1985). Measurement in cross-cultural psychology: A review and comparison of strategies. *Journal of Cross-cultural Psychology*, **17**, 131–152.
- Jaccard, J., Turrissi, R., & Wan, C. K. (1991). *Interaction effects in multiple regression*. Newbury Park: Sage.
- Kiers, H. A. (1990). *SCA: A program for simultaneous component analysis*. University of Groningen: IEC Programma.
- Kruskal, J. B., & Wish, M. (1978). *Multidimensional scaling*. Beverly Hills: Sage.
- Leontiev, A. (1978). *Activity consciousness and personality*. Englewood Cliffs, NJ: Prentice Hall.
- Liebrand, W. B. G., Jansen, R. W. T. L., Rijken, V. M., & Suhre, C. J. M. (1986). Might over morality: Social values and the perception of other players in experimental games. *Journal of Experimental Social Psychology*, **22**, 203–215.
- Linssen, H., & Hagendoorn, L. (1994). Social and geographical factors in the explanation of the content of European nationality stereotypes. *British Journal of Social Psychology*, **33**, 165–182.
- Maki, J., Thorngate, W., & McClintock, C. (1979). Prediction and perception of social motives. *Journal of Personality and Social Psychology*, **37**, 203–220.
- McClintock, C. G. (1988). Evolution, systems of interdependence, and social values. *Behavioral Science*, **33**, 59–75.
- McClintock, C. G., & Van Avermaet, E. (1982). Social values and rules of fairness; A theoretical perspective. In V. J. Derlega, & J. Grzelak (Eds), *Cooperation and helping behavior: Theories and research* (pp. 44–73). New York: Academic Press.
- Millsap, R. E., & Meredith, W. (1989). Component analysis in cross-sectional and longitudinal data. *Psychometrika*, **53**, 123–134.
- Mischel, W. (1973). Toward a cognitive social learning reconceptualisation of personality. *Psychological Review*, **80**, 252–283.

- Mummendey, A., & Schreiber, H. J. (1984). Better or different? Positive social identity by discrimination against or by differentiation from outgroups. *European Journal of Social Psychology*, **13**, 389–397.
- Peeters, G. (1983). Relational and informational patterns in social cognition. In W. Doise, & S. Moscovici (Eds), *Current issues in European social psychology* (pp. 201–237). Cambridge; Cambridge University Press.
- Peeters, G. (1992a). Evaluative meanings of adjectives *in vitro* and in context: Some theoretical implications and practical consequences of positive–negative asymmetry and the behavioral-adaptive concepts of evaluation. *Psychologica Belgica*, **32**, 211–231.
- Peeters, G. (1992b). Self-other anchored evaluations in national stereotypes. Internal Report. Laboratory of Experimental Social Psychology, K. U. Leuven.
- Pervin, L. A. (1983). The stasis and flow of behavior: Toward a theory of goals. In M. M. Page (Ed.), *Nebraska symposium on motivation 1982: Personality—Current theory and research* (pp. 1–53). Lincoln: University of Nebraska Press.
- Read, S. J., & Miller, L. C. (1989). The importance of goals in personality: Toward a coherent model of persons. In R. S. Wyer, & T. K. Srull (Eds), *Advances in social cognition*, Vol. 2. *Social intelligence and cognitive assessments of personality*. Hillsdale, NJ: Erlbaum.
- Read, S. J., Jones, D. K., & Miller, L. C. (1990). Traits as goal-based categories: The importance of goals in the coherence of dispositional categories. *Journal of Personality and Social Psychology*, **58**, 1048–1061.
- Reeder, G. D., & Spores, J. M. (1983). The attribution of morality. *Journal of Personality and Social Psychology*, **44**, 736–745.
- Rosenberg, S., & Sedlak, A. (1972). Structural representations of implicit personality theory. In L. Berkowitz (Ed.), *Advances in experimental social psychology*, Vol. 6 (pp. 235–297). New York: Academic Press.
- Salili, F., Maehr, M. L., & Gillmore, G. (1976). Achievement and morality: A cross-cultural analysis of causal attribution and evaluation. *Journal of Personality and Social Psychology*, **33**, 327–337.
- Schultz, T. R., & Wright, K. (1985). Concepts of negligence and intention in the assignment of moral responsibility. *Canadian Journal of Behavioral Science*, **17**, 97–108.
- Stephan, W. G. (1985). Intergroup relations. In G. Lindzey, & E. Aronson (Eds), *The handbook of social psychology*, (Vol. 2, pp. 599–658). New York: Random House.
- Trzebinski, J. (1985). Action-oriented representations of implicit personality theories. *Journal of Personality and Social Psychology*, **48**, 1266–1278.
- Trzebinski, J., McGlynn, R. P., Gray, G., & Tubbs, D. (1985). The role of categories of an actor's goals in organising inferences about a person. *Journal of Personality and Social Psychology*, **48**, 1387–1397.
- Van Lange, P. A. M., & Kuhlman, M. D. (1994). Social value orientations and impressions of partner's honesty and intelligence. *Journal of Personality and Social Psychology*, **67**, 126–141.
- White, G. M. (1980). Conceptual universals in interpersonal language. *American Anthropologist*, **82**, 759–781.
- Wojciszke, B. (1994). Multiple meanings of behavior: Construing actions in terms of competence and morality. *Journal of Personality and Social Psychology*, **67**, 222–232.
- Wojciszke, B. (1997). Parallels between competence–morality related traits and individualistic–collectivistic values. *European Journal of Social Psychology*.
- Young, F. W., & Lewyckij, R. (1979). *ALSCAL4 user's guide* (2nd edn). Chapel Hill: Data Analysis and Theory Associates, University of North Carolina.